

FIGURE 1

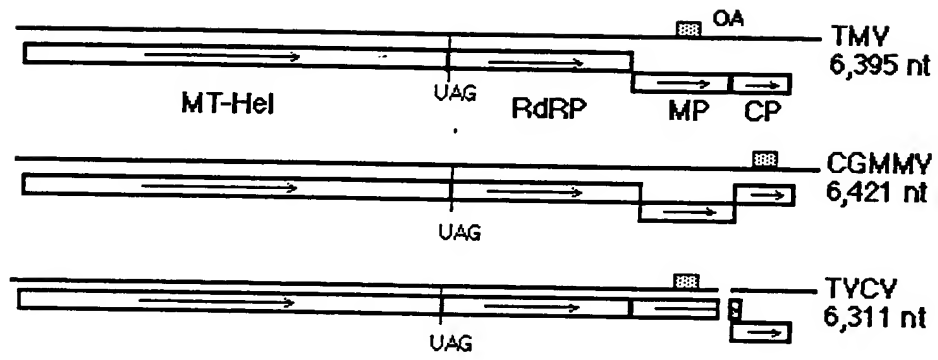


FIGURE 2

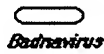
- D13367 Gb(84)_vi:MTVCP Tobacco mosaic virus CP gene. 7/94 474bp.
- D13438 Em(40)_vi:MTVGRNA Gb(84)_vi:MTVGRNA Tobacco mosaic virus genomic RNA. 12/93 6,507bp.
- D17458 Em(40)_vi:MTV30KP Gb(84)_vi:MTV30KP Tobacco mosaic virus (TMV) RNA for 30K protein, complete cds. 3/94 795bp.
- D38444 Em(44)_vi:Mtvcg Gb(90)_vi:Mtvcg Tobacco mosaic virus RNA. 10/94 6,303bp.
- J02412 Em(40)_vi:TO30KOM Gb(84)_vi:MTV30KOM tobacco mosaic virus 30k protein gene. 4/90 961bp.
- J02413 Em(40)_vi:TOC30KCP Gb(84)_vi:MTV30KCP tobacco mosaic virus(cowpea strain) 30k & coat protein genes. 4/90 1,800bp.
- J02415 Gb(84)_vi:MTVVCG Tobacco mosaic virus (strain vulgare), complete genome. 9/88 6,395bp.
- L11665 Em(40)_vi:MTVNGHYPE Gb(84)_vi:MTVNGHYPER Tobacco mosaic virus RNA. 8/93 6,506bp
- L35073 Gb(84)n:MTVCOATPRA Tobacco mosaic virus coat protein, complete cds. 8/94 678bp.
- L35074 Gb(84)n:MTVCOATPRO Tobacco mosaic virus coat protein, complete cds. 8/94 680bp.
- M19101 Em(40)_sy:AGVCHY Gb(84)_sy:SYNRMTVCHY Tobacco mosaic virus/calf chymosin recombined mRNA, promoter and 5' end. 7/89 101bp.
- M19102 Em(40)_sy:AGVLSZ Gb(84)_sy:SYNRMTVLSZ Tobacco mosaic virus/chicken lysozyme recombined mRNA, promotor and 5' end. 7/89 107bp
- M19103 Em(40)_sy:AGVCAT Gb(84)_sy:SYNRMTVCAT Tobacco mosaic virus/plasmid pJII2 chloramphenicol transferase recombined mRNA, leader and 5'
- M19104 Em(40)_sy:AGVNTP Gb(84)_sy:SYNRMTVNTP Tobacco mosaic virus/plasmid pJII3 neomycin phosphotransferase II recombined mRNA, leader and
- M19105 Em(40)_sy:AGVGUSA Gb(84)_sy:SYNVGUSA Tobacco mosaic virus/plasmid pJII119 beta-glucuronidase recombined mRNA, leader and 5' end. 7
- M19106 Em(40)_sy:AGVGUSB Gb(84)_sy:SYNVGUSB Tobacco mosaic virus/plasmid pJII139 beta-glucuronidase recombined mRNA, leader and 5' end. 7
- M24809 Em(40)_vi:TOBMTVGT Gb(84)_vi:MTVGTAMV tobacco mosaic virus RNA, 3' end. 2/90 72bp.
- M24955 Em(40)_vi:MTVU1RAA Gb(84)_vi:MTVU1RAA Tobacco mosaic virus (U1) omega RNA. 9/90 70bp.
- M24992 Gb(84)_vi:MTVU2RAA Tobacco mosaic virus (U2) omega RNA. 9/89 93bp.
- V01405 Em(40)_vi:TOTMV1 Gb(84)_vi:TOTMV1 Tobacco mosaic virus (TMV) RNA 5' coding region (nucleotides 69 to 236). 7/89 168bp.
- V01407 Em(40)_vi:TOTMV3 Gb(84)_vi:TOTMV3 Two tobacco mosaic virus genes (viral transport and coat protein). 9/93 961bp.
- V01408 Em(40)_vi:TOTMV4 Gb(84)_vi:TOTMV4 Tobacco mosaic virus genome (variant 1). 7/83 6,395bp
- V01409 Em(40)_vi:TOTMV5 Gb(84)_vi:TOTMV5 Tobacco mosaic virus genome (variant 2). 7/83 6,398bp.
- X00052 Em(40)_vi:TOTMV6 Gb(84)_vi:TOTMV6 Tobacco mosaic virus (TMV) common strain OM. 5'-terminal region. 6/85 275bp.
- X00053 Em(40)_vi:TOTMV7 Gb(84)_vi:TOTMV7 Tobacco mosaic virus tomato (TMV) strain L. 5'-terminal region. 6/85 278bp.

FIGURE 2 (continued)

- X02144 Em(40)_vi:TOTMV8 Gb(84)_vi:TOTMV8 Tobacco mosaic virus tomato strain (L) genome. 9/93 6,384bp.
- X66047 Em(40)_vi:TMV54KDA Gb(84)_vi:TMV54KDA Tobacco Mosaic Virus RNA for 54 kDa protein. 6/92 1,566bp.
- X68110 Em(40)_vi:TMVCG Gb(84)_vi:TMVCG Tobacco mosaic virus, complete genome. 10/92 6,395bp.
- X70882 Em(40)_vi:TMVPM2CP Gb(84)_vi:TMVPM2CP Tobacco mosaic virus PM2 mRNA for capsid protein. 7/93 765bp
- X70883 Em(40)_vi:TMVDT1CP Gb(84)_vi:TMVDT1CP Tobacco mosaic virus DT1 mRNA for capsid protein. 7/93 765bp.
- X70884 Em(40)_vi:TMVDT2CP Gb(84)_vi:TMVDT2CP Tobacco mosaic virus DT2 mRNA for capsid protein. 7/93 763bp.
- X70885 Em(40)_vi:TMVDT1GCP Gb(84)_vi:TMVDT1GCP Tobacco mosaic virus DT1G mRNA for capsid protein. 7/93 763bp.
- Z29370 Em(40)_vi:TMVRPTPCP Gb(84)_vi:TMVRPTPCP Tobacco mosaic virus (Crucifer) genomic RNA for RNA-dependent RNA polymerase; 122K protein.
- M25782 Em(43)_vi:Sllcp Gb(89)_vi:Sllcp Satellite tobacco mosaic virus coat protein RNA, complete cds. 11/94 1,058bp.

Families of Viruses Infecting Plants

dsDNA (RT)



Badnavirus



Cuscuta virus

100 nm

Families of Viruses Infecting Plants

ssDNA

Geminiviridae



"Subgroup I, II
Geminivirus"



"Subgroup III
Geminivirus"

100 nm

Families of Viruses Infecting Plants

dsRNA



Rhabdovirus
Phytoreovirus
Fytovirus
Onchovirus



Partitivirus
Alphacryptovirus
Betacryptovirus

100 nm

Families of Viruses Infecting Plants

ssRNA (-)



Phabovirus
Cytorhabdovirus
Nucleorhabdovirus



Borna disease virus
Tospovirus



Tenuivirus

ssRNA (+)



Sequiviridae
Tombusviridae



Diurnovirus
Luteovirus
Machlomovirus
Mastovirus
Necrovirus
Sobamovirus
Tymovirus



Enamovirus
Idaeovirus

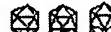
Bromoviridae



Cucumovirus
Bromovirus



Ilarvirus



Alfamovirus



Camovirus

Tobamovirus

Tobravirus

Hordeovirus

Furovirus

Potexvirus

Capillavirus, Trichovirus

Carlavirus

Polyviridae

Clasovirus

100 nm

Figure 3

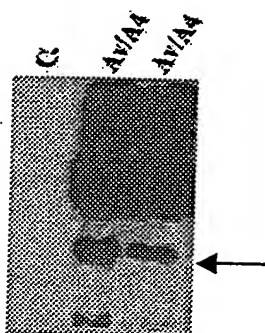
FIGURE 4

- J02001 Gb(84)_vi:MAARNA23 alfalfa mosaic virus (Q strain) rna2 3' end. 2/85 228bp.
- J02003 Em(40)_vi:ALRNA3 Gb(84)_vi:MAARNA3 alfalfa mosaic virus rna 3 35kd protein leader sequence. 4/90 318bp.
- J02005 Gb(84)_vi:MAARNA35 alfalfa mosaic virus (strain 425) rna3 5' end. 2/85 101bp.
- K02702 Gb(84)_vi:MAACG2Z Alfalfa mosaic virus (strain 425 Leiden) RNA 2 of complete genome. 9/88 2,593bp.
- K02703 Em(40)_vi:ALMRNA3 Gb(84)_vi:MAACG3Z Alfalfa mosaic virus (strain 425 Madison) RNA 3 of complete genome. 4/90 2,037bp
- K03542 Em(40)_vi:MAARNA3L Gb(84)_vi:MAARNA3L Alfalfa mosaic virus RNA 3 encoding viral coat protein, complete.B. 4/90 2,142bp.
- L00161 Gb(84)_vi:MAARNA33 Alfalfa mosaic virus (strain Q) RNA 3, 3' end. 8/86 230bp
- L00162 Em(40)_vi:ALMAARNA4 Gb(84)_vi:MAARNA4 Alfalfa mosaic virus (strain 425 Leiden) RNA 4 encoding viral coat protein. 5/94 964bp.
- L00163 Em(40)_vi:ALMAACG1Z Gb(84)_vi:MAACG1Z Alfalfa mosaic virus (strain 425 Leiden) RNA 1 of complete genome. 5/94 3,644bp.
- L00164 Gb(84)_vi:MAARNA13 Alfalfa mosaic virus (strain Q) RNA 1. 8/86 226bp.
- M10826 Em(40)_vi:MAARNA01 Gb(84)_vi:MAARNA4AX Alfalfa mosaic virus (AlMV) RNA 4, 3' terminal fragment 29C. 7/91 91bp.
- M10851 Em(40)_vi:MAARNA4A Gb(84)_vi:MAARNA4A Alfalfa mosaic virus RNA 4, 5' terminal region. 7/89 74bp.
- M25004 Em(40)_vi:ALMAARNAA Gb(84)_vi:MAARNAA Alfalfa mosaic virus RNA 3 or 4, 3' end. 4/92 113bp.
- M25005 Em(40)_vi:ALMAARNAB Gb(84)_vi:MAARNAB Alfalfa mosaic virus RNA 2, 3' end. 4/92 103bp.
- M25006 Em(40)_vi:ALMAARNAC Gb(84)_vi:MAARNAC Alfalfa mosaic virus RNA 1, 3' end. 4/92 110bp.
- M25452 Em(40)_vi:ALMAARNA1 Gb(84)_vi:MAARNA4D Alfalfa mosaic virus RNA 4 RNA fragment. 4/92 62bp.
- M35975 Em(40)_vi:ALMAARNA Gb(84)_vi:MAARNA1A Alfalfa mosaic virus (strain AlMV-S) 5' end of RNA-1. 12/90 163bp.
- M35976 Em(40)_vi:ALMAAR01 Gb(84)_vi:MAARNA1B Alfalfa mosaic virus (strain AlMV-B) 5' end of RNA-1. 12/90 115bp.
- M36389 Em(40)_vi:ALMAAR02 Gb(84)_vi:MAARNA2A Alfalfa mosaic virus (strain AlMV-S) 5' end of RNA-2. 12/90 108bp.
- M36390 Em(40)_vi:ALMAAR03 Gb(84)_vi:MAARNA2B Alfalfa mosaic virus (strain AlMV-B) 5' end of RNA-2. 12/90 109bp.
- M36391 Em(40)_vi:ALMAAR04 Gb(84)_vi:MAARNA3B Alfalfa mosaic virus (strain AlMV-S) 5' end of RNA-3. 12/90 305bp.
- M36392 Em(40)_vi:ALMAAR05 Gb(84)_vi:MAARNA3C Alfalfa mosaic virus (strain AlMV-B) 5' end of RNA-3. 12/90 290bp.

- M59241 Em(40)_vi:ALMAA32K Gb(84)_vi:MAA32KDMP Alfalfa mosaic virus 32 kDa movement protein and coat protein RNA, complete cds. 8/92 2,188bp.
- S55890 Em(40)_vi:S55890 Gb(84)_vi:S55890 RNA-3 coat protein homolog, alfalfa mosaic virus RNA-3 32K protein homolog (RNA-2) (raspberry bushy dwarf virus, Genomic RNA, 2231 nt).
- U12509 Em(43)_vi:Am12509 Gb(89)_vi:Amu12509 Alfalfa mosaic virus NZ1 RNA4 coat protein mRNA, complete cds. 8/94 876bp.
- U12510 Em(43)_vi:Am12510 Gb(89)_vi:Amu12510 Alfalfa mosaic virus NZ2 RNA4 coat protein mRNA, complete cds. 8/94 876bp.
- V00044 Em(40)_vi:ALALM1 Gb(84)_vi:ALALM1 5' end of alfalfa mosaic virus RNA 1. 5/94 61bp.
- V00045 Em(40)_vi:ALALM2 Gb(84)_vi:ALALM2 5' end of alfalfa mosaic virus RNA 2. 5/94 13bp.
- V00046 Em(40)_vi:ALALM3 Gb(84)_vi:ALALM3 5' end of alfalfa mosaic virus RNA 3. 5/94 101bp.
- V00047 Em(40)_vi:ALALM4 Gb(84)_vi:ALALM4 Intercistronic junction in alfalfa mosaic virus RNA 3. 5/94 122bp.
- V00048 Em(40)_vi:ALALM5 Gb(84)_vi:ALALM5 alfalfa mosaic virus RNA 4 coding for the coat protein. 5/94 881bp.
- V00049 Em(40)_vi:ALALM6 Gb(84)_vi:ALALM6 3' end of alfalfa mosaic virus RNA 1. 7/91 226bp.
- V00050 Em(40)_vi:ALALM7 Gb(84)_vi:ALALM7 3' end of alfalfa mosaic virus RNA 2. 7/91 228bp.
- V00051 Em(40)_vi:ALALM8 Gb(84)_vi:ALALM8 3' end of alfalfa mosaic virus RNA 3. 7/91 230bp.
- V00052 Em(40)_vi:ALAM01 Gb(84)_vi:ALAM01 Alfalfa mosaic virus RNA 1 fragment. (Obtained after digestion with ribonuclease T1.). 5/94 8
- V00053 Em(40)_vi:ALAM02 Gb(84)_vi:ALAM02 Alfalfa mosaic virus RNA 1 fragment. (Obtained after digestion with ribonuclease T1.). 5/94 6
- V00054 Em(40)_vi:ALAM03 Gb(84)_vi:ALAM03 Alfalfa mosaic virus RNA 1 fragment. (Obtained after digestion with ribonuclease T1.). 5/94 4
- V00055 Em(40)_vi:ALAM04 Gb(84)_vi:ALAM04 Alfalfa mosaic virus RNA 1 fragment. (Obtained after digestion with ribonuclease T1.). 5/94 4
- V00056 Em(40)_vi:ALAM05 Gb(84)_vi:ALAM05 Alfalfa mosaic virus RNA 1 fragment. (Obtained after digestion with ribonuclease T1.). 5/94 4
- V00057 Em(40)_vi:ALAM06 Gb(84)_vi:ALAM06 Alfalfa mosaic virus RNA 1 fragment. (Obtained after digestion with ribonuclease T1.). 5/94 3
- V00058 Em(40)_vi:ALAM07 Gb(84)_vi:ALAM07 Alfalfa mosaic virus RNA 1 fragment. (Obtained after digestion with ribonuclease T1.). 5/94 3
- V00059 Em(40)_vi:ALAM08 Gb(84)_vi:ALAM08 Alfalfa mosaic virus RNA 1 fragment. (Obtained after digestion with ribonuclease T1.). 5/94 3
- V00060 Em(40)_vi:ALAM09 Gb(84)_vi:ALAM09 Alfalfa mosaic virus RNA 1 fragment. (Obtained after digestion with ribonuclease T1.). 5/94 2
- V00061 Em(40)_vi:ALAM10 Gb(84)_vi:ALAM10 Alfalfa mosaic virus RNA 1 fragment. (Obtained after digestion with ribonuclease T1.). 5/94 2

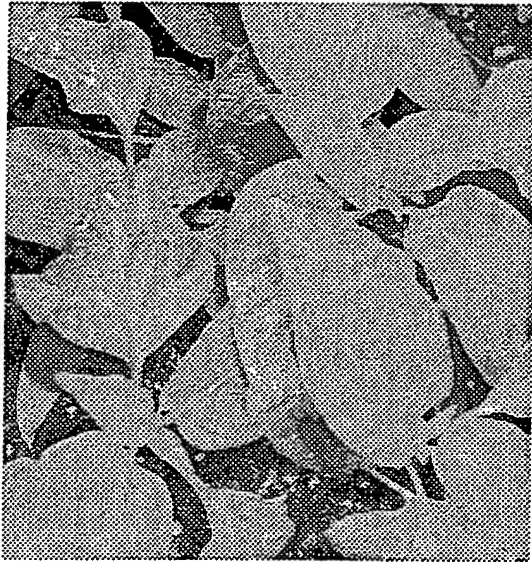
- V00062 Em(40)_vi:ALAM11 Gb(84)_vi:ALAM11 Alfalfa mosaic virus RNA 1 fragment. (Obtained after digestion with ribonuclease A.). 5/94 25
- V00063 Em(40)_vi:ALAM12 Gb(84)_vi:ALAM12 Alfalfa mosaic virus RNA 1 fragment. (Obtained after digestion with ribonuclease A.). 5/94 19
- V00064 Em(40)_vi:ALAM13 Gb(84)_vi:ALAM13 Alfalfa mosaic virus RNA 1 fragment. (Obtained after digestion with ribonuclease A.). 5/94 19
- V00065 Em(40)_vi:ALAM14 Gb(84)_vi:ALAM14 Alfalfa mosaic virus RNA 1 fragment. (Obtained after digestion with ribonuclease A.). 5/94 18
- V00066 Em(40)_vi:ALAM15 Gb(84)_vi:ALAM15 Alfalfa mosaic virus RNA 1 fragment. (Obtained after digestion with ribonuclease A.). 5/94 18
- V00067 Em(40)_vi:ALAM16 Gb(84)_vi:ALAM16 Alfalfa mosaic virus RNA 1 fragment. (Obtained after digestion with ribonuclease A.). 5/94 15
- V00068 Em(40)_vi:ALAM17 Gb(84)_vi:ALAM17 Alfalfa mosaic virus RNA 1 fragment. (Obtained after digestion with ribonuclease T1.). 5/94 9
- X00819 Em(40)_vi:ALAM19 Gb(84)_vi:ALAM19 Alfalfa mosaic virus (strain S) complete RNA 3 sequence. 9/93 2,055bp.
- X01572 Em(40)_vi:A1MVRNA2 Gb(84)_vi:A1MVRNA2 Alfalfa mosaic virus (A1M4) RNA 2. 7/91 2,593bp.
- M28374 Em(43)_vi:Maatbts7a Gb(89)_vi:Maatbts7a Alfalfa mosaic virus (clone 143) temperature-sensitive mutant Tbts7 RNA3 (coat protein-encoding)
- M28375 Em(43)_vi:Maatbts7b Gb(89)_vi:Maatbts7b Alfalfa mosaic virus (clone 112) temperature-sensitive mutant Tbts7 RNA3 (coat protein-encoding), 5' end fragment.

FIGURE 5

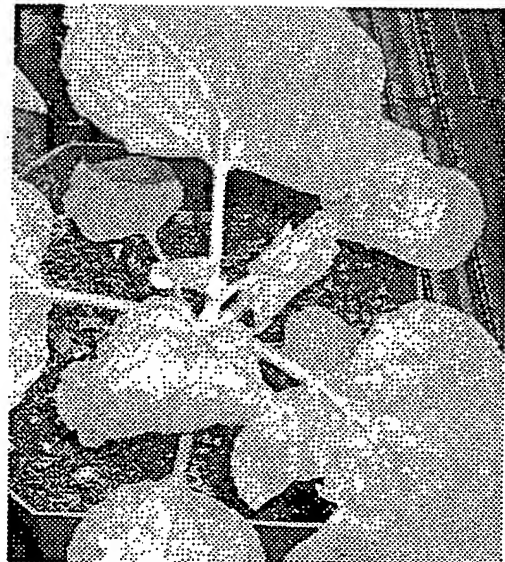


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FIGURE 6



Pepper plants

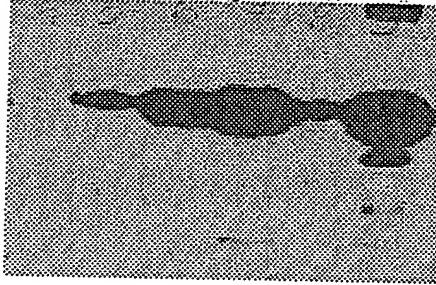


N. benthamiana

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FIGURE 7

C- Av/A4
Systemically infected leaves



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FIGURE 8

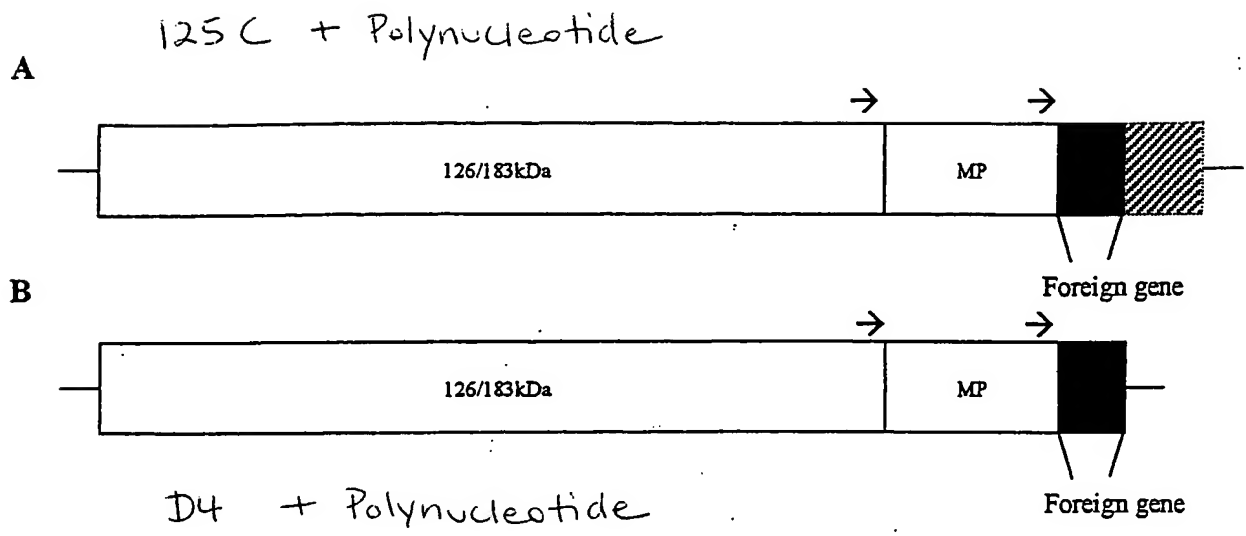
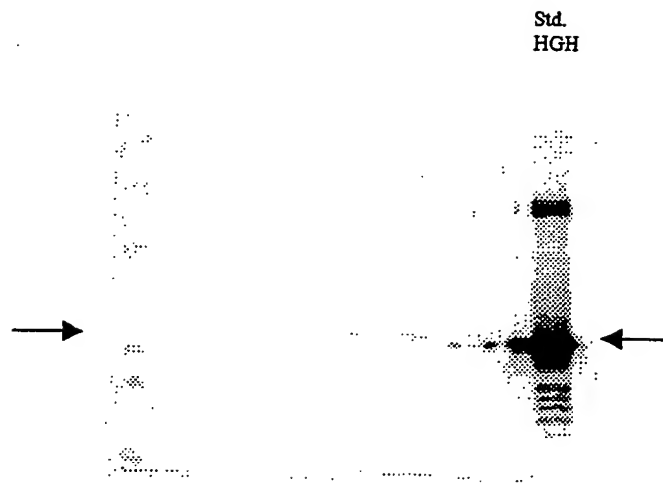
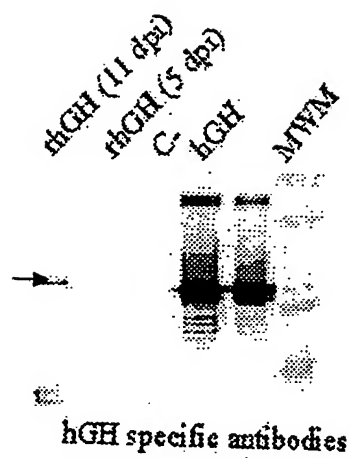


FIGURE 9



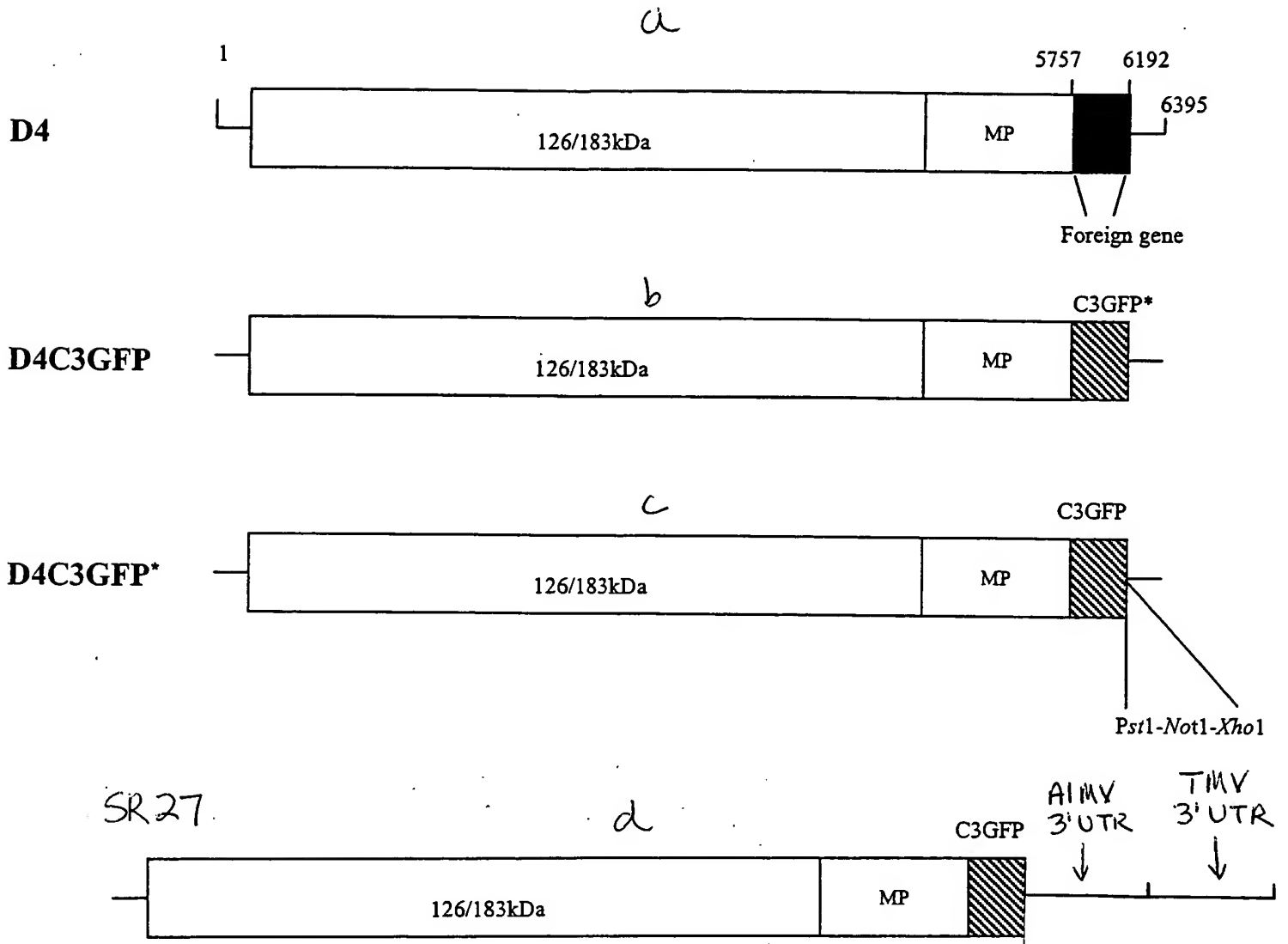
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FIGURE 10



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FIGURE 11



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FIGURE 12



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